

Treatment of Poisoning

■ Atropine and 2-PAM

- Atropine is used as a treatment for both OP poisoning and carbamate poisoning
- 2-PAM is used only for OP poisoning

Cholinesterase Tests

■ Significance of Cholinesterase Tests

- ChE tests measure the amount of cholinesterase in the blood. If an employee has a recorded baseline level and the exposure tests are below 60% of their baseline, the employee has to be removed from work until their levels are 80% of their baseline.

Cholinesterase Tests

■ Methods:

- Several types of ChE tests:
 - Boehringer Mannheim Test kit
 - Sigma Test kit
 - Ellman method
- These tests use different methods to measure the ChE and the units of reporting are different.

Cholinesterase Tests

■ Methods

- New regulation on cholinesterase testing attempts to standardize reporting methods of each laboratory
- Laboratories are expected to comply by June 30, 2002.

Methyl Bromide

- Characteristics
- Uses
- Illnesses



Methyl Bromide

- Characteristics
 - Halogenated hydrocarbon
 - Gas at room temperature
 - 3 times as heavy as air
 - Colorless, nonflammable
 - * poor warning properties, unsafe exposures occur without odor



Methyl Bromide

- Currently, pesticide is used as a fumigant
 - For soil before planting
 - For crops being stored or transported
 - For structural pest control
 - Very good penetrant of concrete, leather, rubber



Methyl Bromide Related Illness

- Highly toxic chemical
- Routes of absorption
 - Inhalation
 - Dermal



Methyl Bromide Related Illness

- Signs and Symptoms appear related to the length and concentration of exposure
 - May not occur immediately. Symptoms may occur 4-48 hours later.
 - Variety of symptoms are seen
 - Recovery can be delayed
 - Several organ systems may be affected

Methyl Bromide Related Illness

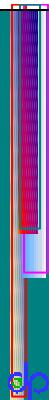
- Signs and Symptoms
 - Pulmonary (coughing, shortness of breath)
 - Pulmonary edema, can lead to pneumonia, can cause respiratory failure
 - Contribute to circulatory failure
 - Skin Effects
 - Itchiness, burning, redness and blisters (like second degree burn)
 - Kidney
 - Acute Kidney failure

Methyl Bromide Related Illness

- Signs and Symptoms
 - Liver
 - Mild to moderate liver function test abnormalities
 - Sometimes jaundice (yellowing of skin and mucous membranes)
 - Eyes
 - Irritation and burning


Methyl Bromide Related Illness

- Diagnosis
 - History, physical examination, lab tests
- Management
 - No specific antidote
 - Treatment is symptomatic
 - Treatment of seizure; anticonvulsants



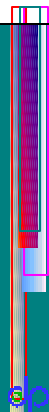
Chloropicrin

- Characteristics
- Uses
- Illnesses




Chloropicrin

- Characteristics
 - Colorless, slightly oily liquid with intense pungent odor
 - Heavier than air



Chloropicrin

- Characteristics
 - Colorless, slightly oily liquid with intense pungent odor
 - Heavier than air



Chloropicrin

- Now used as a fumigant (at 100% or in 33-50% combo with methyl bromide)
 - Nematicide for soil
 - Insecticide for stored grain
- Currently used as a warning agent for other fumigants such as methyl bromide and sulfuryl fluoride
 - Causes lacrimation and mucous membrane irritation at relatively low concentrations

Chloropicrin Related Illness

- Effects due to its properties as an irritant
- Routes of absorption
 - Inhalation
 - Dermal
 - Ingestion



Chloropicrin Related Illness

- Signs and Symptoms
 - Eyes: tearing
 - Pulmonary: Cough, shortness of breath, wheezing, pleuritic chest pain, bronchitis, pneumonia, pulmonary edema
 - Neurologic: headache, nausea, vomiting, vertigo, fatigue
 - Skin: Irritation



Chloropicrin Related Illness

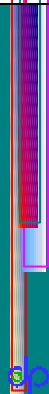
- Diagnosis:
 - History, Exposure history
 - Physical examination
- Management
 - No specific antidote
 - Treatment is supportive care
 - Decontamination procedures (flush eyes and skin)



Sulfuryl Fluoride Related Illness


- Characteristics
 - Colorless, odorless gas
 - Low solubility in most organic solvents
- Uses
 - Vikane, fumigate structures
 - Usually used with chloropicrin





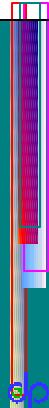
Sulfuryl Fluoride Related Illness

- Signs and symptoms
 - Weakness, nausea, vomiting, cramps, abdominal pain, itching
 - Serum fluoride levels elevated
- Treatment
 - Symptomatic




Pyrethrins and Pyrethroids

- Characteristics
 - Pyrethrins derived from chrysanthemum flowers
 - Pyrethroids are synthetic pyrethrins
 - One of the least poisonous to mammals
- Uses
 - Insecticide
 - Inhibit nervous system of insects



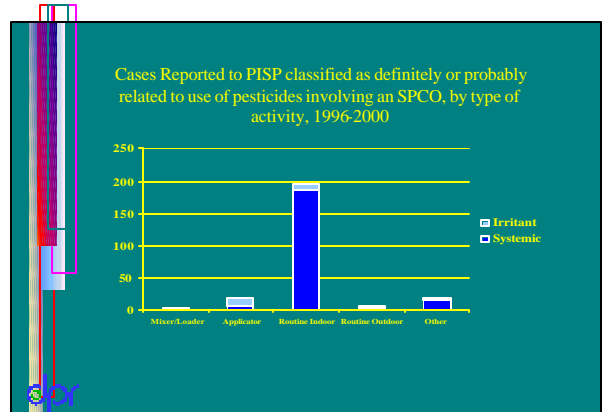
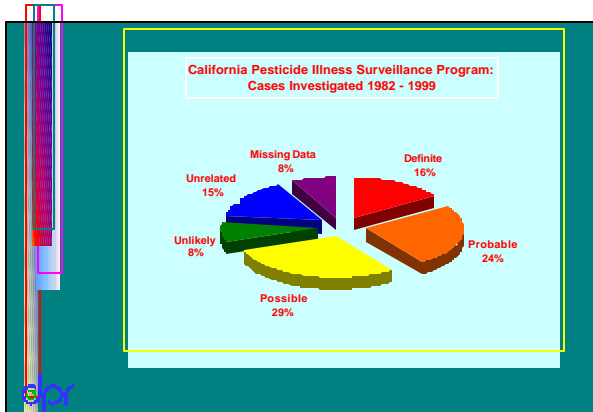
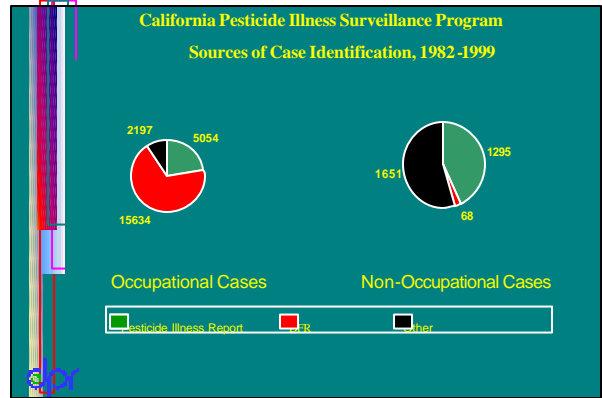
Pyrethrins and Pyrethroids Illness

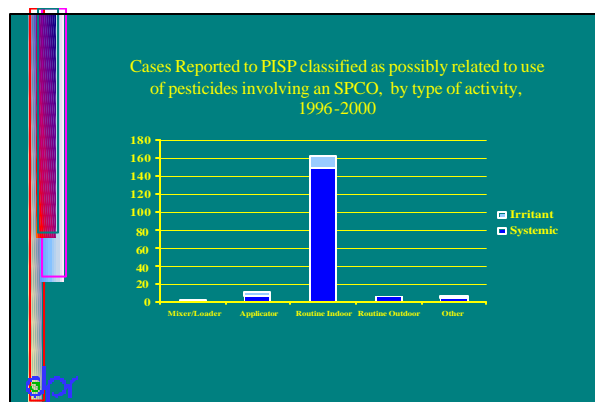
- Signs and Symptoms:
 - Inhalation can cause coughing, wheezing, shortness of breath, runny or stuffy nose, chest pain or difficulty breathing
 - Skin contact can cause a rash, itching, blistering



Other Pesticides

- Petroleum distillates
 - Used as solvent for numerous pesticide formulations
 - May cause skin, eye and mucous membrane irritation





Pesticide Active Ingredients Identified in Cases Reported to the California Pesticide Illness Surveillance Program, 1995 - 1999, Kings County

Agricultural Use		Non-Agricultural Use	
Methamidophos	20	Sodium Hypochlorite	9
Chlorpyrifos	17	Cyanuric Acid	4
Mepiquat Chloride	15	Quaternary Ammonia	3
Diuron	11		
Ethephon	10		
Thiadiazuron	10		

Pesticide Active Ingredients Identified in Cases Reported to the California Pesticide Illness Surveillance Program, 1995 - 1999, San Mateo County

Agricultural Use		Non-Agricultural Use	
Abamectin	5	Sodium Hypochlorite	26
Bifenthrin	4	Glutaraldehyde	7
Dienochlor	4	Hydrogen Chloride	4
Mancozeb	4	Diazinon	3
Metalaxyl	4		
Thiophanate-methyl	4		

AGENDA - DAY 2

MORNING SESSION

- Branch 2, 3 Truck Inspection (Field)
- Branch I Fumigation Application (Field)

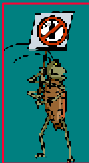
AFTERNOON SESSION

- Inspection Review/ Discussion
- Branch I Fumigation Aeration Presentation
- New and Proposed SPCB Regulations
- Closing and questions



REIMBURSEMENT

- DPR will reimburse all expenses incurred in this training to CAC staff according to guidelines outlined in ENF 00-37.
- Submit all request to:
Mostafa Chrichi
DPR
P.O. BOX 4015
Sacramento, CA 95812-4015

A small, pixelated image of a person in a military-style uniform holding a sign that says "NO". The image is enclosed in a red rectangular border. The person is wearing a helmet and a uniform with a backpack. The sign is a white square with a black border and the word "NO" in black letters. The background of the slide is teal. There is a vertical bar on the left side with a blue and white checkmark icon at the bottom.

"If within 24 hours following application you experience symptoms similar to common seasonal illness comparable to the flu, contact your physician or poison control center (telephone number) and your pest control company **immediately**

(This statement shall be modified to include any symptoms of overexposure which are not typical of influenza.)

It is the policy of the company to use only registered pesticides and to use them in accordance with the label. The degree of risk depends upon the degree of exposure, so exposure should be minimized. It is noted that persons following the above instructions upon exposure should not consider themselves comparable to the flu, unless their physician or poison control center indicates otherwise and does not contact another healthcare provider.

11) For further information, please refer to the pesticide label and the company's register and label for the use of the following ingredients:

12) For further information, please refer to the pesticide label and the company's register and label for the use of the following ingredients:

COUNTY OF LOS ANGELES
 OFFICE OF THE COUNTY CLERK
 COUNTY AGRICULTURAL COMMODITIES STRUCTURAL NOTIFICATION
 2002

THIS FORM MUST BE ACCOMPANIED BY A SIGN NOTIFICATION FEE

PROPERTY	PROPERTY OWNER
APPLICANT/OWNER	PROPERTY VALUE
APPLICANT/OWNER	APPLICANT/OWNER
APPLICANT/OWNER	APPLICANT/OWNER
APPLICANT/OWNER	APPLICANT/OWNER
APPLICANT/OWNER	APPLICANT/OWNER

(Check all that apply)

PROPERTY	PROPERTY OWNER
APPLICANT/OWNER	PROPERTY VALUE
APPLICANT/OWNER	APPLICANT/OWNER
APPLICANT/OWNER	APPLICANT/OWNER
APPLICANT/OWNER	APPLICANT/OWNER
APPLICANT/OWNER	APPLICANT/OWNER

In case of emergency, call 311 for EMERGENCY NUMBER.

SIGNATURE: _____ DATE: _____

I hereby certify that the information provided on this form is true and correct. I understand that any false information provided on this form may result in a fine and/or imprisonment. I understand that any false information provided on this form may result in a fine and/or imprisonment. I understand that any false information provided on this form may result in a fine and/or imprisonment.

PROVIDER PROFILE FORM

GENERAL INFORMATION

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE: _____ FAX: _____

CONTACT INFORMATION

CONTACT NAME: _____

CONTACT ADDRESS: _____

CONTACT CITY: _____ CONTACT STATE: _____ CONTACT ZIP: _____

CONTACT PHONE: _____ CONTACT FAX: _____

PRACTICE INFORMATION

PRACTICE NAME: _____

PRACTICE ADDRESS: _____

PRACTICE CITY: _____ PRACTICE STATE: _____ PRACTICE ZIP: _____

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DEMOGRAPHIC INFORMATION

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DEMOGRAPHIC ADDRESS: _____

DEMOGRAPHIC CITY: _____ DEMOGRAPHIC STATE: _____ DEMOGRAPHIC ZIP: _____

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DEMOGRAPHIC PHONE: _____ DEMOGRAPHIC FAX: _____

B&P Code § 1970, Standards and Record Requirements, contains specific requirements for structural pest control business records.

(b) The report for each pest control operation, other than fumigation, in which a pesticide was used shall contain the following information:

1. Date of treatment.
2. Name of owner or his or her agent.
3. Address of property.
4. Total area treated.
5. Target pest or pests controlled.
6. Pesticide and amount used.
7. Identity of person or persons who applied the pesticide.

[illegible][illegible]

STRUCTURAL - BRANCH 1
USE MONITORING INSPECTION

INSPECTOR: [Name]
DATE: [Date]
TIME: [Time]

VIOLATION NOTICE # [Number]
VIOLATION NOTICE # [Number]

STRUCTURAL - BRANCH 1
USE MONITORING INSPECTION

INSPECTOR: [Name]
DATE: [Date]
TIME: [Time]

VIOLATION NOTICE # [Number]
VIOLATION NOTICE # [Number]

6780. General Fumigation Safe-Use Requirements

(a) When fumigant concentrations cannot be controlled and an employee's exposure exceeds the Permissible Exposure Limit (PEL) as specified in Title 8, California Administrative Code, Section 5155, Airborne Contaminants, or more stringent requirements by product labeling, the employer shall provide and require the employee to wear approved respiratory protective equipment.

(b) Whenever an employee may be exposed above an exposure standard to methyl bromide, sulfur fluoride, or any other fumigant for which only air-supplied respirator equipment is approved, the employer shall either:

- (1) Require the use of air-supplied respirator equipment,
- (2) Employ continuous monitoring to warn employees before the PEL is reached, or
- (3) Operate under the provisions of (c) below.

(c) Upon written application by an employer, the director will review, and may accept, a Fumigation Safety Program that describes methods, work practices, devices, or processes which the director determines will ensure that employees will not be exposed to concentrations of fumigants in excess of the P.E.L.

(d) The employer shall have an accident response plan at the worksite. The plan shall provide instructions to protect employees during situations such as spills, fire, and leaks. Employees shall be trained in accident management procedures based on the plan.

PURPOSE

To reduce the fumigant concentration between the tarpaulin covering and structure (site) and thereby minimize exposure to the crew allowing tarpaulin removal without exceeding the 5 ppm label exposure value limit for surfuryl fluoride

